Federal Communications Commission
445 12th Street S.W.
Washington, DC , 20554

DOCKET FILE COPY ORIGINAL

7/18/02

RE: RM-9404
ET- Docket No. 02-98 RM-9404
Notice of Proposed Rule Making, Adopted; May 2, 2002
Comments Supporting Tentative Decision : C. Proposal; paragraph 27

Current Tentative Decision
C: Proposal ;#27 "Amateur radio operations in the 160-190kHz band under the Part 15 rules will not be affected. Under these rules, amateur operations must meet certain power and antenna length requirements, ------

It is certainly commendable that the FCC withstood all the pressure from ARRL to approve their request for a 200 watt, band for Ham use only in the 160-190kHz band.

My concern now is that it is reported that a 2 year permit has been granted by the FCC to allow one Ham operator, Michael Troy, Carmel, NY, to operate in the 160-190kHz and the 137kHz band with a power of 200 watts and an antenna height of 200 feet. Such a permit could completely kill a very active group of serious and dedicated experimenters currently operating under the Part 15, 1 watt & 50 ft antenna, regulations. I respectfully request that you consider adding restrictions to this temporary permit to offer some protection to the active 1 watt beacons currently in operation in the 160-190kHz band. Possible restrictions to the temporary permit, that would be helpful, might include:

- The 200 watt power only be allowed in the 137 kHz. Band.
- The operation be allowed only in the range of 160 to 165kHz
- Time and frequency and length of transmission to be specified.

Any of these changes might help to save the serious involvement of the many dedicated experimenters that have been working for many years under the Part 15 regulations

It is not clear that the FCC is fully aware of the efforts that have been going on in this low frequency band. The LOWDOWN publication covering this experimental work goes back to 1976. To give you a better picture of this activity, I am enclosing a copy of the cover page of 2 typical issues, and a list of the current active " Lowfer " beacons. Also enclosed is a copy of a story that appeared in the April 2002 issue describing how Brice Anderson devised a way to raise his 40 Foot " Lowfer" antenna tower by himself. This was no small task, when you learn that Brice is 83 years old. This is the type of effort and dedication that is prevalent among the "Lowfers" operating in this band. To allow an unrestricted , ,even temporary, 200 watt operation in this 160-190Khz band would do a serious injustice to every one who has been experimenting in this band for over 25 years.

I wrote Mr. M. Troy requesting that he consider not operating with 200 watts in the 160-190kHz band but from his response I could only surmise that he felt I was completely out of line in making such a request.

W E Bowers

William E. Bowers, PE, (TX-#17690)
11542 S. Kirkwood
Stafford, TX 77477
281-530-4364
txbill77@ev1.net

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List ABCDE

CC: LOWDOWN, M. Troy, Monitoring Times

M. F. Troy
27 Mechanic St.
Carmel, NY 10512

6/4/02

MIKE:

The story in the latest LOWDOWN stated that you were issued a permit by the FCC to operate a 200 watt experimental transmitter on the 135.7 – 137.8 and the 160 – 190 kHz band. I certainly appreciate that this is an exciting and challenging opportunity.

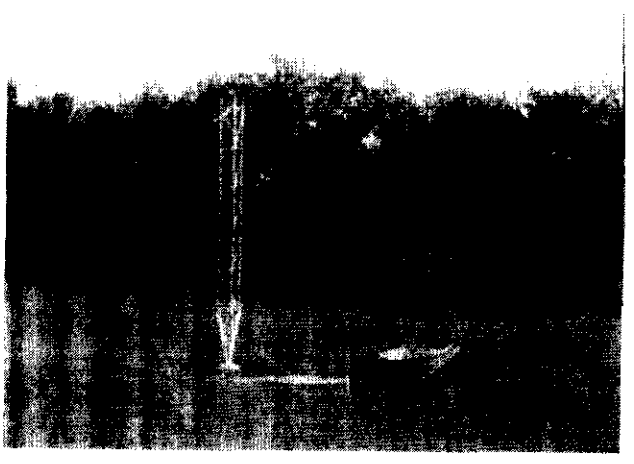
I would hope that you would have enough respect and consideration for the many active 1 watt LOWFERS currently operating all over the 160- 190 kHz band , to limit your experimentation to the 135.7 – 137.8 band. Even part time transmission at 200 watts would kill all the interest of the many dedicated LOWFER beacon operators as well as all the serious listeners that have spent many hours developing reception techniques capable of receiving a 1 watt signal.

I just recently moved from Oklahoma to Texas. I took down my " OK " lowfer beacon antenna and moved the parts here to Texas. My wife and I spent the past week clearing grass, digging a foundation, pouring cement and starting the erection of the " OK ", antenna. Frankly, I have decided to put all my plans on hold until you clarify your plans for operation in the Lowfer band. No size of the top hat, number and type of ground radials or high Q coils will allow my 1 watt to be picked up at any distance if you are operating with 200 watts in the same band.

I would appreciate your publishing a statement in the LOWDOWN as to your plans in the LOWFER band.

Bill Bowers

CC: Lowdown, FCC



THE
LOWDOWN
A PUBLICATION OF THE LONGWAVE CLUB OF AMERICA

MAY

THE
LOWDOWN
A PUBLICATION OF THE LONGWAVE CLUB OF AMERICA

SEPTEMBER

The 1750 Meter Band

ON THE AIR 160 - 190 kHz • John H. Davis, Box 367, Warm Springs GA 31830
E-mail: part15@lwca.org • *Web:* http://www.lwca.org

Moving right along... That describes both the Beacon Roundup and the DX season. Reports of LowFER reception began picking up in mid-November, indicating we might have a slightly belated but pretty good season overall.

The Roundup has bogged down a little, by comparison. The last of the postal inquiries went out in the first week of November. A number of those have already been updated by the operators, but we're still missing a rather surprising number of returns from some of the batches mailed in October. We are progressing, but we really do need your help to make the beacon list and contact information accurate.

Sunset; or, Zero-Based Budgeting. As of the January issue, the list below will contain only beacons whose operators have contacted us this fall (by December 15 as a practical matter), or whose signals have been reported actually heard by other members. We will wipe the slate clean of unconfirmed entries...as some of my predecessors in this column had to do before me...since the number of questionable items has again reached levels where it's not fair to serious listeners to keep wasting their time with inaccurate information.

It's difficult enough to hear a LowFER signal over any significant distance. The best way to make sure it happens is to get accurate information about your station to potential listeners, and the best place is right here. Thanks to all who have updated!

Notice anything different below? The type is just a bit smaller, and we've shifted the column alignment, in hopes of being able to include the more detailed 6-character Maidenhead grid designators in future. Please advise whether readability is still acceptable. (Beacon Bits this month will be found in the LF Notebook column.)

The LowFER listing, updated through November 17. *Italicized* listings have not been confirmed recently and are in peril of disappearing! Please help by returning your Roundup form as soon as possible, or contact me promptly by e-mail. As always, please report errors or schedule changes too. Thanks!

VLF AND ULF BEACONS

983 Hz	R	Durant, OK	DM23	John R. Wright; by request.

WESTERN LOW FREQUENCY BEACONS REPORTED

(West Coast Amateur Radio Net Thurs., 8 pm ; and Sun., 7:30 am; 3927 kHz+/-, LSB)

174.0	NUT	Simi Valley, CA	DM04	Amy Caputi
181.167	IZJ	San Gabriel, CA	DM04	Ed Phillips W6IZJ, mostly 24/7
182.516	NR	Riverside, CA	DM13	Bill Gates N6WHP Sat/ Sun 24h
183.160	PRK	Saratoga, CA	CM97	Dan Smith K6PRK
183.500	PLI	Burbank, CA	DM04	Dave Curry; CW+BPSK; SSB Sat 8 am
183.500	ELU	Simi Valley, CA	DM04	R. Seden WD6ELU SSB Wkend
183.500	ZTM	Layton, UT	DN41	Pete Smith K7ZTM; returns in fall
183.544	MEL	San Jose, CA	CM97	Mitchell Lee; by request
184.324 *	LEA	Salem, OR		Mick Reed; new *
185.185	FAW	Riverton, UT	DN40	Chris Spencer WB7FAW
187.088	M	Brawley, CA	DM22	Mark Monte AB6ZQ
187.370	HM	Prescott, AZ	DM34	Howard Myers W7ILW; exc. rain
187.650	HDO(null)	Morro Bay, CA	CM95	Cliff Buttschardt; BPSK; by req
188.000 *	DJL	Newbury Park, CA	DM04	Darwin Long IV; temp off *
189.500 *	X	Wheatland, WY	DN72	Max Carter; discontinued *
189.600	IDF	Idaho Falls, ID	DN73	Tod Olson, KØTO; BPSK

EASTERN/CENTRAL/CANADIAN LOW FREQUENCY BEACONS

(Eastern Nets: 1983 kHz various evenings; ~7280 kHz, Sat/Sun afternoon.)

160.000	HTTP	Bennington, NY	FN02	Andrew Kroll
170.000	GSD	Gary, SD	EN14	Gary Carlson WØGC; intrmtt
172.418	NF	New Freedom, PA	FM19	WN3F; mix SlowCW & 7wpm; 24/7
174.600	8TXT	Sandusky, OH	EN81	Michael Agsten WA8TXT
175.000	D	Des Moines, IA	EN31	Tom Gruis, KØHTF; alt 164.44
175.0	5FEK	Bixby, OK	EM25	Jerry Moyer, N5FEK
175.388	KRY	Chardon, OH	EN91	Joe Saloka; Nov 1 - Mar 1
176.000	CA	Carmel, NY	FN31	K2PUT; under construction
177.777	NC	Stanfield, NC	EM95tg	Dexter W4DEX; Nov thru Mar
177.900	MPK	Chittenango, NY	FN23	Donald Moth W2MPK
178.600	ZWI	Baldwinsville, NY	FN13	Howard Mortimer WB2ZWI; exc storm
180.000	via K3DI	Arnold, MD	FM19	Dick Wilder K3DI ; VFO; by sked
181.620	RL	Herndon, VA	FM18	Robt. Laney WB7PZU; intrmtt
182.200	BRO	Duluth, MN	EN36	Bryce Ofstie KIØLE; BPSK/CW
182.500	UD	Wakefield, QC	FN25	Don Dawson VE2UD; intrmtt
182.700	TFQ	Centertown, KY	EM67	Doug Smith WB4TFQ; wkends & holidays
182.90	A30	Monroeville, PA	FN00	Mike Lamanna, WA3O
183.333	3ZIM	N Toronto, ON	FM04	Patrick VA3ZIM
184.3 *	A3P	?		Larry Thomas AA3PX; new *
184.320	YWK	Dallas, GA	EM74	Will Payne N4YWK; intermittent
184.320	RI	Rifton, NY	FN21	Pierre Thomson; off for summer
184.500	JDH	Bonaire, GA	EM82	AB4MS; Nov-Mar 1, CW
184.700	BK	Shell Lake, WI	EN45	Bruce Koehler BPSK/CW
184.877	R	Durant, OK	DM23	CW, John Wright; wkends; alt 169.8
185.300	WA	Andover, MA	FN42	Bill Ashlock; unique CW ID pattern
185.500	RED	Wausa, FL	EM70	C. Wadford; BPSK even days, CW odd
185.900	3SCO	Scarborough, ON	FN03	Scott Reynolds, VE3SCO
186.00	GW	Athens, Ohio	EM89	Greg Weinfurtner NS8O
186.375	BA	Lancaster, IL	EM68	Brice Anderson W9PNE, 24 hr
186.700	LEK	Aitkin, MN	EN36	Lyle Koehler; CCW/BPSK
186.800	MS	Scottsburg, IN	EM78	Michael Stidam
186.890	VPMO	Valley Park, MO	EM48	Gary G. Herbst
186.920	RB	Freeport, IL	EN52	R Bicking, W9RB; 24/7
186.986	BOB	Mahomet, IL	EN50	Bob Hoffswell AA9DH
187.300	1LF	Calera, AL	EM63	See XMGR; CCW/BSPK; limited time
187.352	DCH	Berlin, MD	FM28	Dave Holland
187.500	YD	White City, FL	EL79	Bernie KQ4YD; CW; (BPSK by req.)
187.500	K	Oak Ridge, TN	EM75	Michael Coffey, Jr KE4QDZ
187.600	MV	Sallsbury, NY	FN22	Tim Pauly N2GFT; moving QTH
187.780	MOO	Monroeville, NJ	FM29	Norm Harbison Jr K2NH, Intrmt
187.800 *	VA	Smith Mtn Lake, VA	FM07	Bart Prater, N4ZV; returns *
188.150	YHO	Mason, OH	EM79	Bill Dawson, K8YHO
188.570	QYV	Donora, PA	FN00	Bob Sethman
189.200 *	GIR	New Eagle, PA	FN00	Geo. M. Jacob KA3GIR; 24/7; on *
189.200 *	SAM	Crystal, MN	EN35	Sam Eastey WØIMG
189.30	ARK	Leslie, AR	EM35	Len W9ECH; Nov 1 - Mar 1
189.360	TH	Colts Neck, NJ	FN20	Carl Lundgren Jr; CW QTH-day, ID-night
189.500	XMGR	Helena, AL	EM63	Les Rayburn N1LF; CCW/ BPSK
189.550 *	LP	Riviera Beach, MD	FM19rc	Larry Putnam WB3ANQ; new *
189.700	TEXAS	Haslet, TX	EM12	Bill Cantrell WD5CVG; BPSK/CW
189.800	RM	Duluth, MN	EN36	Roger Magnuson KØMVJ
189.950	OK	Davenport, OK	EM15	Bill Bowers; CW/BPSK

BPSK Schedules. LowFER BPSK beacons generally use MS100 ET1 mode, and the run length is the number of characters in the call plus one, unless noted. Of those which alternate between CW and BPSK during each hour, the following run CW or CCW the first thirty minutes and BPSK the second thirty minutes: **LEK, OK, XMGR.** The following run the opposite schedule: **TEXAS, BRO, 1LF.** *73.* •••

AN ICE-STORM-PROOF VERTICAL

By Brice Anderson

This is a vertical antenna composed of #16 copper wire with a wire top hat supported by a 40 foot mast made of white, 2 inch, schedule 40 PVC. Since I am unable to climb towers, trees, or even tall ladders after I had both hips replaced in 1993, I have hadto devise and erect towers from the ground or a short ladder. I am 83 years old now, but was 77 in 1995 when I put up this particular vertical antenna. Figure 1 shows the completed antenna.

I figured that a secure 4"x 4" post was the key to the success of the project. So I bought a treated 8 foot 4"x 4" and buried it 2 foot. I attached a well-painted 2"x 4", 12 foot long, with bolts, washers, and nuts to the 4"x 4". The vertical antenna is secured with 4 sets of guy wires, and when beginning the assembly, the lowest set of guys, composed of 3 guy lines, complete with their insulators, are fastened at the 10 foot level of the 2"x 4". The ground anchors for the guys are then placed and the guys are pulled tight at the anchors, and using a carpenters' level, the 2"x 4" is made vertical with the guys tightened.

A pulley with about 50 foot of heavy manila rope is attached temporarily to the top of the 4"x 4". Another pulley with two 50 foot lengths of 1/4 inch nylon rope was temporarily attached to the top of the 2"x 4". Figure 2 shows the procedure for erection and assembly so far. The manila rope is fastened to the mast at the 20 foot level with a loosely fitting wire ring. This ring and the other rings are fitted loose so that they can be later shaken and pulled down the mast, but not so loose that they will slip past the guy wires when the manila rope is pulled to raise the mast. The 2 nylon ropes are fitted with rings at the 30 foot and 36 foot level. I picked a nice, warm, windless day to perform the erection of the mast.

A 6 foot step-ladder provided initial support for the mast. At this time, I attached the top pulley and its 80 foot loop of 1/4 inch diameter nylon rope. The other three sets of guy lines were now attached with their insulators at the 20 foot, 30 foot, and at the top of the mast. The sets of guy lines were draped carefully down the pole with a hank of rope to hold them close against the mast. The reason you would do this is that the weight of the guy lines plus their drag along the ground will make it impossible to pull the mast up without bending to the breaking point, much less just the physical effort as I discovered when I first started to erect the mast.

The procedure went like this: I pulled rope A as shown in Figure 2 until the mast bent at the 20 foot level, then I tied off rope A to the ground anchor. Moving on to ropes B and C, pulled on them until the mast was fairly straight again, and then tied off ropes B and C to the ground anchor. In this manner, pulling on rope A, and then ropes B and C, the mast was brought up to about 60 degrees vertical angle without stressing the mast unduly.

Climbing the ladder at the 2"x 4", I pulled the mast to the 2"x 4" and tied off the mast to the wood with a piece of guy wire. This is fairly easy as the weight of the mast is mostly vertical at this point. Unwrapping the upper guy wire sets from the mast, I led the individual guy wires out to their respective ground anchors. I first tightened the guy sets on the side of the pull ropes and then

hurriedly pulled all the guys as needed to make the mast vertical and secure. The mast stood vertical and had good balance. I then worked down the rings by pulling on ropes A, B, and C. I also used an aluminum pole 20 foot long to hook onto the rings and help them down. I also removed the pulleys off the gin pole.

The job was finished by repeatedly making correction with all nine guy wire sets until the mast was perfectly vertical. I left 2 or 3 inches of slack in each guy but even on the windiest day, the mast stands tall and straight. The whole erection procedure would have been easy with the help of one or two more men.

The final step is to attach the no. 16 enameled wire to the junction point of the top-hat sections. The loop of rope at the pulley on the top of the mast has an insulator to which the antenna wire is fastened. I carefully pulled up the radiating vertical section of wire and top-hat, being careful to work the top-hat portion over the guy points as necessary. I tied one side of the top-hat off to a 30 foot steel pole and the other side of the top-hat to a tower. The top-hat is almost horizontal, with a slight sag of 10 foot overall.

Why would I say this antenna is ICE-STORM proof? Because it is still up after five winters. Every one of my previous ten verticals lasted one year, or until the first ice-storm of the winter. If I know a severe wind storm is on the way, I loosen the rope a few feet. However, many storms have caught the antenna while is was pulled up tight.

Last summer as we came home from church, I was shocked to see the mast in somewhat of an "S" shape. Examination showed that the 30 foot, 20 foot, and 10 foot level guys were gone on one side. The mast was still up, but appeared to be ready to come down at any moment. As best as I could tell, a deer had come crashing through the yard and snapped off the guy wires, breaking them off at the mast. I easily fixed the two lowest guys, the 30 foot level guy took quite a while to fix properly.

This antenna has enabled my BA beacon to reach New Jersey, Florida, Oklahoma, and Minnesota. Some of my earlier antennas went further though. All in all, BA has been heard in 23 states plus the VE3 zone of Canada. I have QSO'd 15 states, with New Jersey and South Carolina being the best distances, using CW at about 10 words per minute.

Brice Anderson
PO Box 14
Lancaster, IL 62855